K22P 0155

Reg. No. : .....

Name : .....

II Semester M.Sc. Degree (CBSS – Reg./Supple./Imp.) Examination, April 2022
(2018 Admission Onwards)
BOTANY
BOT 2C08 : CELL AND MOLECULAR BIOLOGY

Time : 3 Hours Max. Marks : 60

I. Answer **any two** of the following. **(2×8=16)**

1) Write an account on the organisation and role of centromere and telomere.

OR

2) Explain molecular models of recombination in eukaryotes.

3) Explain the mechanism of cell communication in plants and animals.

OR

4) Write on the bacterial gene control with the help of a standard model.

II. Answer **any two** of the following. **(2×6=12)**

5) a) Satellite and repetitive DNA. 3
   b) Packaging of DNA into chromosomes. 2
   c) Introns. 1

6) a) Karyotype and Idiogram. 3
   b) Karyotyping. 2
   c) Chromosome banding. 1

7) a) Reassociation kinetics of DNA and cot values. 3
   b) Alternate forms of DNA. 2
   c) Oscillating gene. 1

P.T.O.

III. Answer **any six** of the following. **(6×3=18)**

8) Spindle formation and its disintigration.
9) Cytokinesis in plants and animals.
10) Mitochondrial DNA mutations leading to diseases.
11) Evolutionary significance of aberrations.
12) Epigenetic control of cancer.
13) Junctional and non-junctional adhesive mechanism.
14) Tumor induction and angiogenesis.
15) Post replication and recombinational repair of DNA.

IV. Answer **any seven** of the following. **(7×2=14)**

16) Tandem exon duplication.
17) Gene regulation disorders.
18) Tay Sachs disease.
19) Secondary messengers.
20) Meiotic recombination check point.
21) Ribonomics.
22) Retrotransposanes.
23) Transcription repressors.
24) stRNA.
25) Cdk activating kinase.
26) Fragile X syndrome.

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